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ABSTRACT OF THE DISCLOSURE

A Video-on-Demand Server architecture (100, 200, 300) transmits a plurality of pre-coded programs having different bit rates across a fixed bandwidth channel (11). For each
5 program, a generator (12₀-12_{P-J}, 110, 210) generates a plurality of different bit rate representations for each program. Each generator also provides control information at each of a plurality of successive time windows T for each bit rate representation. The control information provides a bit rate and a quality measure during each time window T. The control information enables a statistical multiplexer (16, 160, 260) to select a bit rate representation for each program
10 during each time window T to maximize the quality of the selected representations while not exceeding the total available channel capacity.